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October 30, 2013

Dania Zinner  
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EPA CONTRACT NUMBER EP-W-10-033  
TASK ORDER NUMBER 2019  
QUALITY ASSURANCE SUPPORT FOR THE LIBBY ASBESTOS SITE

Dear Ms. Zinner:

Enclosed please find the Third Quarter 2013 Quarterly QA Report. This report is a deliverable under Task 6 of Task Order 2019.

If you have any questions, please feel free to contact me.

Sincerely,

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cc: Administrative Contracting Officer (letter only)  
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## TECHNICAL MEMORANDUM

TO: Dania Zinner, USEPA Region 8

FROM: Michael Lenkauskas, CB&I Federal Services, LLC

DATE: October 30, 2013

SUBJECT: Third Quarter 2013 Quarterly QA Report – Task Order 2019

This technical memorandum represents the Third Quarter 2013 Quarterly QA Report for Task Order 2019, *Quality Assurance Support for the Libby Asbestos Site*. It includes, by task and QA element, a summary of the QA activities completed for the period of July 1, 2013 to September 30, 2013. The QA elements addressed in this quarterly report are consistent with Tasks 1 through 9 of Task Order 2019 and represent work performed by CB&I Federal Services, LLC under its Quality Assurance Technical Support contract EP-W-10-033.

### Task 1 – Review of Existing Quality Documents

QATS continued to support the development or revision of project-specific laboratory modifications and standard operating procedures (SOPs). Table 1 provides the status of the laboratory modifications reviewed during the quarter and as of the last monthly conference call held on September 4, 2013. Following Table 1 is a summary description of each laboratory modification.

**Table 1 – Laboratory Modifications Reviewed During the Quarter**

Lab Mod	Description Summary	Status	Effective Date
LB-000066E	Applies to investigative samples for TEM from the Libby site.	EPA Approved	08/28/2013
LB-000091	Addresses inconsistencies to the current indirect preparation SOP (EPA-Libby-08).	EPA Approved	08/08/2013
LB-000092	Tree bark and duff samples not prepared as specified in SOP.	EPA Approved	07/11/2013

- Laboratory Modification LB-000066E – This modification applies to all investigative samples (as defined by the relevant SAPs and their SAP Analytical Summary Sheets) analyzed by TEM (regardless of the specific TEM method) for the Libby Asbestos Site. This modification does not apply to non-investigative samples unless otherwise indicated by the SAP Analytical Summary Sheet. QATS completed a technical review of the document during the quarter, and it was approved by EPA on 08/28/2013.



- Laboratory Modification LB-000091 – This modification was developed to address inconsistencies to the current indirect preparation SOP (EPA-Libby-08). QATS completed a technical review of the document during the quarter, and it was approved by EPA on 08/08/2013.
- Laboratory Modification LB-000092 – This modification is a laboratory-specific (RESI) modification generated to address described deviations by the laboratory for the preparation and analysis of duff and tree bark samples. These deviations were discovered during the most recent on-site audit of this laboratory. QATS completed a technical review of the document during the quarter, and it was approved by EPA on 07/11/2013.

QATS also reviewed during the quarter the *SOP ER8-Libby-01 – Libby Chain-of-Custody Documentation* and provided review comments to EPA.

## **Task 2 – Libby Amphibole Laboratory-specific Mentoring Program Support**

QATS participated in three Libby Laboratory Conference Calls during the quarter, which are summarized below by date and topics discussed:

### 07/24/2013 Conference Call:

- Libby Laboratory Modification(s) status update
- Indirect preparation laboratory modification LB-000091
- PLM-VE valid values for LA fiber color

### 08/28/2013 Conference Call:

- Libby Laboratory Modification(s) status update
- COC SOP (FINAL ER8-LIBBY-01; Rev. 0) review
- Hard copy data deliverable discrepancies and required format
- Laboratory Modification LB-000066E; NaK coding
- OU3 Laboratory QC Frequencies

### 09/04/2013 Conference Call:

- Libby Laboratory Modification status update
- COC SOP (FINAL ER8-LIBBY-01; Rev. 0)
- Data Package Assembly
- Laboratory Modification LB-000066E; NaK coding
- OU3 Laboratory QC Frequencies

For each conference call, QATS provided input to each discussion topic, compiled notes, and distributed these notes as minutes to the TOPO.

## **Task 3 – Track and Coordinate Quality Control (QC) Sample Programs**

The following laboratory QC sample program support was provided by QATS during the third quarter of 2013:

- QATS completed the review of the hard copy and electronic deliverables associated with the 2010, 2011, and 2012 TEM inter-laboratory studies. Missing information from the database was obtained from ESAT and/or the laboratories prior to completion of the review. The results were incorporated into the annual report (refer to Task 8).

- QATS completed the review of laboratory and sample preparation facility (SPF) QC analyses during the quarter. All missing entries identified in the database were requested from ESAT and/or the laboratories and received during the period. The reviews were conducted to ensure compliance with the applicable project-specific criteria as described in Laboratory Modifications LB-000073C, LB-000029D, and other relevant quality documents. The QC results were incorporated into the annual report (refer to Task 8).
- QATS completed the review of PLM data associated with the 2012 PLM inter-laboratory studies and PESs distributed during the same time frame. All results were evaluated to ensure compliance with the project-specific criteria as described in Laboratory Modification LB-000073C. The QC results were incorporated into the annual report (refer to Task 8).
- In accordance with laboratory modification LB-000073C, QATS selected a 1% sample of the PLM-VE analyses performed from 01/01/2013 through 06/30/2013 to be distributed for an inter-laboratory study. A distribution list was submitted to EPA on 9/24/2013, which was forwarded to ESAT for retrieval and distribution of the associated fine ground (FG) aliquots to the applicable laboratories.

QATS participated in nine Scribe weekly conference calls held during the quarter on the following dates: 07/04/2013, 07/10/2013, 07/24/2013, 07/31/2013, 08/14/2013, 08/21/2013, 09/04/2013, 09/11/2013, and 09/18/2013. Topics discussed on these calls included:

- Significant structural changes to the database
- Identified discrepancies and suggested corrections or adjustments
- Overall improvements to user interaction

#### **Task 4 – Asbestos Sample Data Validation**

QATS completed the validation of 5% of the Libby TEM, PLM, and PCM deliverables analyzed from 2010 through 2012. A total of 263 validation reports were completed and submitted to EPA during the quarter.

Selection of five percent (5%) of sample results to validate was performed by randomly choosing sample results by laboratory, method, and media. A total of 2,227 field samples (898 from 2010; 550 from 2011; and 779 from 2012) from 263 Laboratory Job Numbers, analyzed by five different laboratories between 2010 and 2012 were selected for validation.

Very few Libby asbestos data were qualified. Qualifiers were applied to seven field samples and one QC sample (re-preparation), or approximately 0.31% of the 2,227 asbestos samples validated. Five samples and one QC sample were qualified due to the failure of the laboratory to perform and/or document daily calibration activities, and two samples were qualified for field blank contamination. Several samples not associated with a daily calibration were not qualified due to the submission and review of other information suggesting acceptable instrument performance, such as spectra, daily Standard Reference Material (SRM) analysis, review of the bracketing daily alignment, evaluation of concordance between recounts or re-preparations, or the presence of structures versus non-detected results.

As part of the validation, entries reported by the laboratories on the bench sheets and EDDs were evaluated for consistency. Bench sheets/EDD discrepancies were observed in 254 of the 2,227 samples validated (11.4%); however, 249 (98%) of these were minor and did not impact the reported results.

### **Task 5 – Asbestos Laboratory On-site Audit Support**

QATS provided support to three asbestos on-site laboratory audits scheduled by EPA during the quarter. These three audits were one-day audits focused on resolving deficiencies identified during the 2012 audits and any issues discovered from QC analysis and validation activities. The on-site audits performed during the quarter are listed below:

- EMSL Analytical, Libby, MT – 07/09/2013
- Sample Preparation Facility (SPF), Troy, MT – 07/11/2013
- Hygeia Laboratories, Sierra Madre, CA – 08/28/2013

No significant findings were observed during the above on-site audits that would warrant immediate corrective actions. EMSL-MT and Hygeia both provided acceptable corrective actions to findings from the previous on-site audit which was noted during their most recent on-site audit. The SPF, Troy-MT facility provided proposed corrective actions to the previous on-site audit report; however, during the most recent on-site audit of their facility, the majority of the proposed corrective actions had not been initiated.

The following on-site audit is scheduled for the next quarter:

- EMSL Analytical, Cinnaminson, NJ – 10/08/2013

The completion of the on-site audit reports for the seven on-site audits performed in 2013 is currently underway.

### **Task 6 – Provide Quarterly Report as a Memorandum**

This document represents the Third (3<sup>rd</sup>) Quarter 2013 Quarterly Report.

### **Task 7 – Participate in Quarterly Laboratory Conference Calls**

QATS participated in a conference call on 09/19/2013 to discuss “highly discordant” results between laboratories for three (3) TEM-ISO soil samples analyzed for the Libby Flowerbed Study. Of particular interest were the inconsistencies in the reporting of structure elemental composition (i.e., NaK), which is used to categorize structures into the appropriate asbestos type (i.e., OA, TR/AC, LA, or NAM). The call focused on inconsistencies reported by the EMSL Libby laboratory. As a result of the call, EPA put a hold on analysis by this laboratory of any investigative samples until additional on-site training can be performed by qualified ESAT TEM analysts, and the proficiency of laboratory personnel is determined.

### **Task 8 – Provide Annual Summary Report of all QA Activities Performed During the Year**

QATS completed the evaluation of all data required for inclusion into the annual report, and submitted the draft 2010-2012 Annual QA/QC Summary Report to EPA on 09/25/2013. Following the receipt of all EPA comments during the next quarter to this draft report, QATS will make the necessary changes and deliver a final report by the scheduled due date of 11/04/2013.

**Task 9 – Modify Existing Libby Site-wide QAPP**

QATS submitted a final copy of the Site-wide Quality Assurance Reference Document (QARD) (rev. 1) to EPA on 03/06/2013. On 04/01/2013, EPA submitted a final copy of the Site-wide QARD (rev. 1) to the contractor CDM Smith for review, who submitted their comments to EPA on 04/09/2013. QATS is in the process of revising the Site-wide QARD to incorporate the latest comments received from CDM Smith. QATS will submit a final copy of the report during the next quarter.